

Figure 1

gacaaaactcacacatgtccaccttgtccagctccggaactcctggggggaccgtcagtc 60
D K T H T C P P C P A P E L L G G P S V 20
221 226 231 236

ttcctcttcccccaaaaccaaggacaccctcatgatctcccgaccctgaggtcaca 120
F L F P P K P K D T L M I S R T P E V T 40
241 246 251 256

tgcgtggtggtggacgtgagccacgaagaccctgaggtcaagttcaactggtacgtggac 180
C V V V D V S H E D P E V K F N W Y V D 60
261 266 271 276

ggcgtggaggtgcataatgccaagacaaagccgcgggaggagcagtacaacagcacgtac 240
G V E V H N A K T K P R E E Q Y N S T Y 80
281 286 291 296

cgtgtggtcagcgtcctcaccgtcctgcaccaggactggctgaatggcaaggagtacaag 300
R V V S V L T V L H Q D W L N G K E Y K 100
301 306 311 316

tgcaaggtctccaacaaagccctcccagccccatcgagaaaaccatctccaaagccaaa 360
C K V S N K A L P A P I E K T I S K A K 120
321 326 331 336

gggcagccccgagaaccacaggtgtacaccctgcccccatcccgggatgagctgaccaag 420
G Q P R E P Q V Y T L P P S R D E L T K 140
341 346 351 356

aaccaggtcagcctgacctgcctggtcaaaggcttctatcccagcgacatcgccgtggag 480
N Q V S L T C L V K G F Y P S D I A V E 160
361 366 371 376

tgggagagcaatgggcagccggagaacaactacaagaccagcctcccggtgctggactcc 540
W E S N G Q P E N N Y K T T P P V L D S 180
381 386 391 396

gacggctccttcttctctacagcaagctcaccgtggacaagagcaggtggcagcagggg 600
D G S F F L Y S K L T V D K S R W Q Q G 200
401 406 411 416

aacgtcttctcatgctccgtgatgcatgaggctctgcacaaccactacacgcagaagagc 660
N V F S C S V M H E A L H N H Y T Q K S 220
421 426 431 436

ctctccctgtctccgggtaaa
L S L S P G K 681
441 446 227

Figure 2

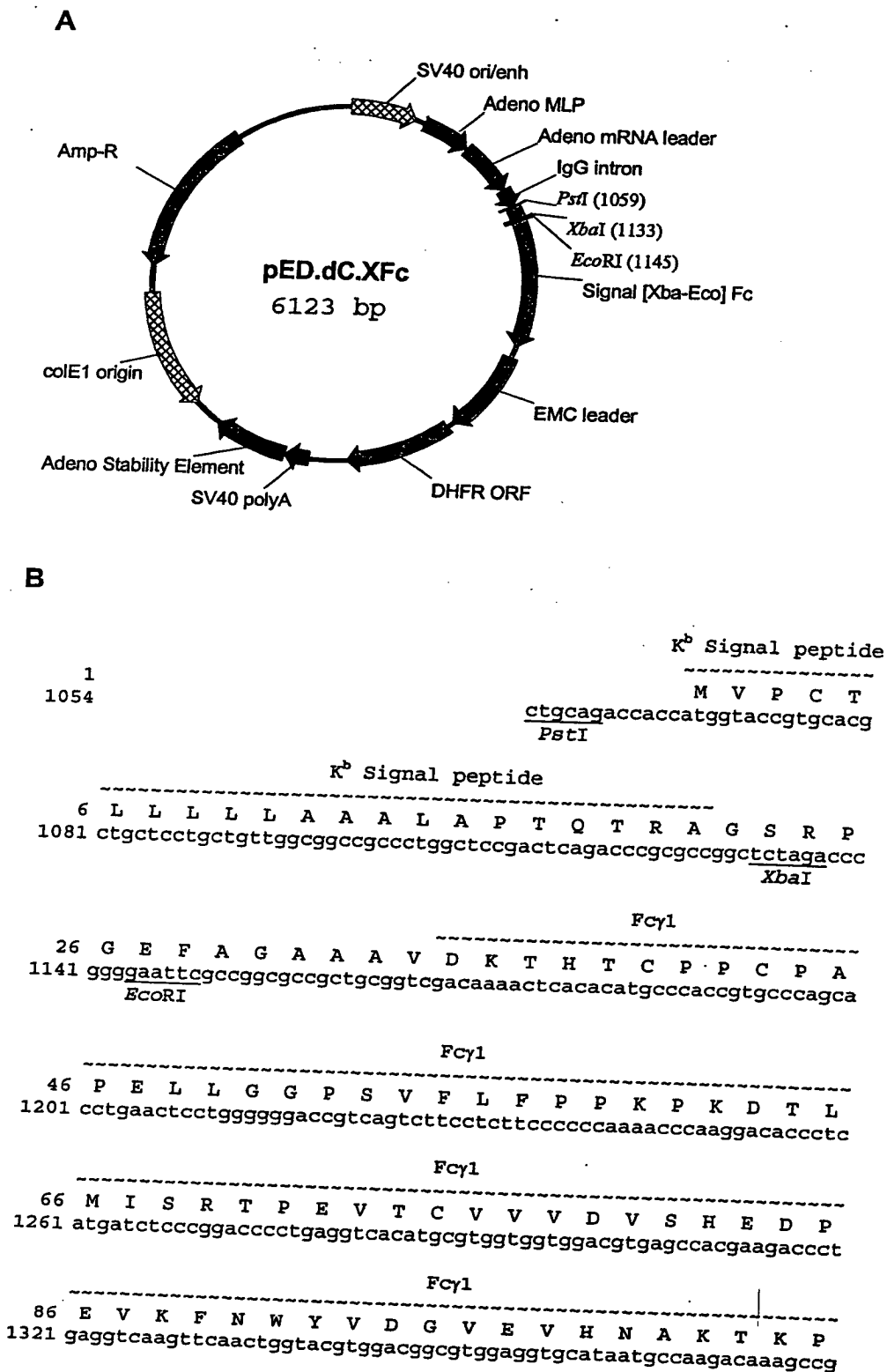
A SEQ ID NO:3

| | | | | | | |
|------------|------------|------------|------------|------------|-------------|-----|
| atgggggtgc | acgaatgtcc | tgcttggtg | tggtttctcc | tgtccctgct | gtcgctccct | 60 |
| ctgggctcc | cagtctggg | cgccccacca | cgcctcatct | gtgacagccg | agtcctgcag | 120 |
| aggtacctct | tggaggccaa | ggaggccgag | aatatcacga | cgggctgtgc | tgaacactgc | 180 |
| agcttgaatg | agaatatcac | tgtcccagac | accaaagtta | atttctatgc | ctggaagagg | 240 |
| atggaggtcg | ggcagcaggc | cgtagaagtc | tggcagggcc | tggccctgct | gtcgggaagct | 300 |
| gtcctgcggg | gccaggccct | gttggtcaac | tcttcccagc | cgtgggagcc | cctgcagctg | 360 |
| catgtggata | aagccgtcag | tggccttcgc | agcctcacca | ctctgcttcg | ggctctggga | 420 |
| gcccagaagg | aagccatctc | ccctccagat | gcggcctcag | ctgctccact | ccgaacaatc | 480 |
| actgctgaca | ctttccgcaa | actcttccga | gtctactcca | atttcctccg | gggaaagctg | 540 |
| aagctgtaca | caggggaggg | ctgcaggaca | ggggacaga | | | 579 |

B SEQ ID NO:4

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| MGVHECPAWL | WLLLSLLSLP | LGLPVLGAPP | RLICDSRVLQ | RYLLEAKEAE | NITTGCAEHC | 60 |
| SLNENITVPD | TKVNFYAWKR | MEVGQQAVEV | WQGLALLSEA | VLRGQALLVN | SSQPWEPLQL | 120 |
| HVDKAVSGLR | SLTTLLRALG | AQKEAISPPD | AASAAPLRTI | TADTFRKLFR | VYSNFLRGKL | 180 |
| KLYTGEACRT | GDR | | | | | 193 |

Figure 3



Applicant: Blumberg et al.
Title: CENTRAL AIRWAY FOR SYSTEMIC
DELIVERY OF THERAPEUTICS
Express Mail Label No. EV 292547396 US
Date of Deposit: July 17, 2003
Docket No. S01383.70011.US

Fcyl

106 R E E Q Y N S T Y R V V S V L T V L H Q
1381 cgggaggagcagtacaacagcacgtaccgtgtggtcagcgtcctcaccgtcctgcaccag

Fcyl

126 D W L N G K E Y K C K V S N K A L P A P
1441 gactggctgaatggcaaggagtacaagtgcaaggtctccaacaaagccctcccagcccc

Fcyl

146 I E K T I S K A K G Q P R E P Q V Y T L
1501 atcgagaaaaccatctccaaagccaaagggcagccccgagaaccacaggtgtacaccctg

Fcyl

166 P P S R D E L T K N Q V S L T C L V K G
1561 ccccatcccgggatgagctgaccaagaaccaggtcagcctgacctgcctgggtcaaaggc

Fcyl

186 F Y P S D I A V E W E S N G Q P E N N Y
1621 ttctatcccagcgacatcgccgtggagtgggagagcaatgggcagccggagaacaactac

Fcyl

206 K T T P P V L D S D G S F F L Y S K L T
1681 aagaccacgcctcccgtgttgactccgacggctccttcttctctacagcaagctcacc

Fcyl

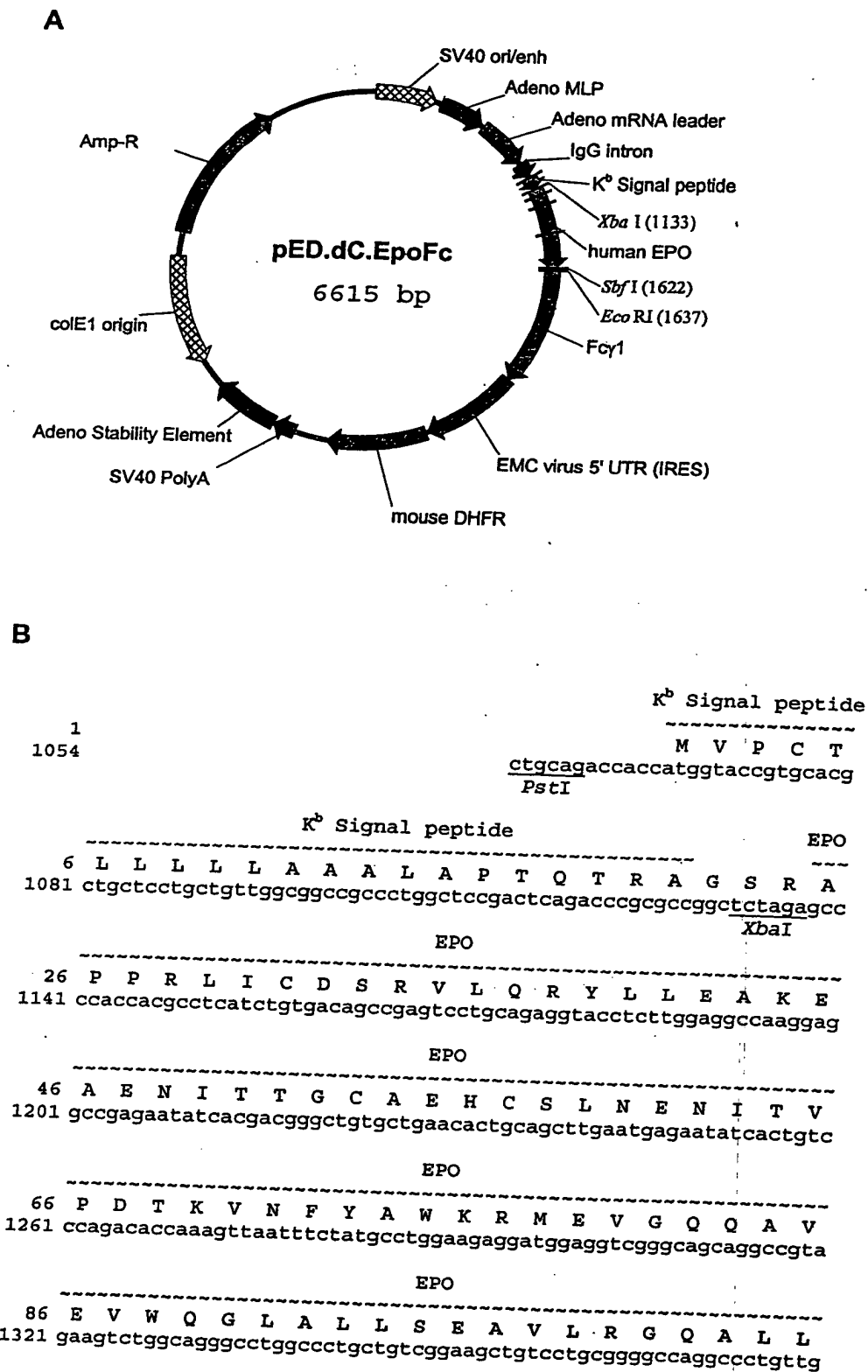
226 V D K S R W Q Q G N V F S C S V M H E A
1741 gtggacaagagcaggtggcagcaggggaacgtcttctcatgctccgtgatgcatgaggct

Fcyl

246 L H N H Y T Q K S L S L S P G K
1801 ctgcacaaccactacacgcagaagagcctctccctgtctccgggtaaatga

(SEQ ID NO:6)
(SEQ ID NO:5)

Figure 4



EPO

106 V N S S Q P W E P L Q L H V D K A V S G
1381 gtcaactcttcccagccgtgggagccccctgcagctgcatgtggataaagccgtcagtggc

EPO

126 L R S L T T L L R A L G A Q K E A I S P
1441 cttcgcagcctcaccactctgcttcgggctctgggagcccagaaggaagccatctccct

EPO

146 P D A A S A A P L R T I T A D T F R K L
1501 ccagatgcggcctcagctgctccactccgaacaatcactgctgacactttccgcaaactc

EPO

166 F R V Y S N F L R G K L K L Y T G E A C
1561 ttccgagtctactccaatttctccggggaaagctgaagctgtacacaggggagggcctgc
SbfI

EPO

Fcyl

186 R T G D R E F A G A A A V D K T H T C P
1621 aggacaggggacagagaattcgcggcgccgctgcgggtcgacaaaactcacacatgccca
EcoRI

Fcyl

206 P C P A P E L L G G P S V F L F P P K P
1681 ccgtgccccagcacctgaactcctgggggacccgtcagctcttctcttccccccaaaacc

Fcyl

226 K D T L M I S R T P E V T C V V V D V S
1741 aaggacaccctcatgatctcccgaccctgaggtcacatgcgtggtggtggacgtgagc

Fcyl

246 H E D P E V K F N W Y V D G V E V H N A
1801 cacgaagaccctgaggtcaagtccaactggtacgtggacggcgtggaggtgcataatgcc

Fcyl

266 K T K P R E E Q Y N S T Y R V V S V L T
1861 aagacaaagccgcgggaggagcagtacaacagcacgtaccgtgtggtcagcgtcctcacc

Fcyl

286 V L H Q D W L N G K E Y K C K V S N K A
1921 gtcctgcaccaggactggctgaatggcaaggagtacaagtgaagggtctccaacaaagcc

Fcyl

306 L P A P I E K T I S K A K G Q P R E P Q
1981 ctcccagcccccatcgagaaaaccatctccaaagccaaagggcagccccgagaaccacag

Fcyl

326 V Y T L P P S R D E L T K N Q V S L T C
2041 gtgtacaccctgcccccatcccggtatgagctgaccaagaaccaggtcagcctgacctgc

Fcyl

346 L V K G F Y P S D I A V E W E S N G Q P
2101 ctggtcaaaggcttctatcccagcgacatcgccgtggagtgggagagcaatgggcagccg

Applicant: Blumberg et al.
Title: CENTRAL AIRWAY FOR SYSTEMIC
DELIVERY OF THERAPEUTICS
Express Mail Label No. EV 292547396 US
Date of Deposit: July 17, 2003
Docket No. S01383.70011.US

Fcγ1

366 E N N Y K T T P P V L D S D G S F F L Y
2161 gagaacaactacaagaccacgcctcccgtgttggaactccgacggctccttcttctctac

Fcγ1

386 S K L T V D K S R W Q Q G N V F S C S V
2221 agcaagctcaccgtggacaagagcaggtggcagcaggggaacgtcttctcatgctccgtg

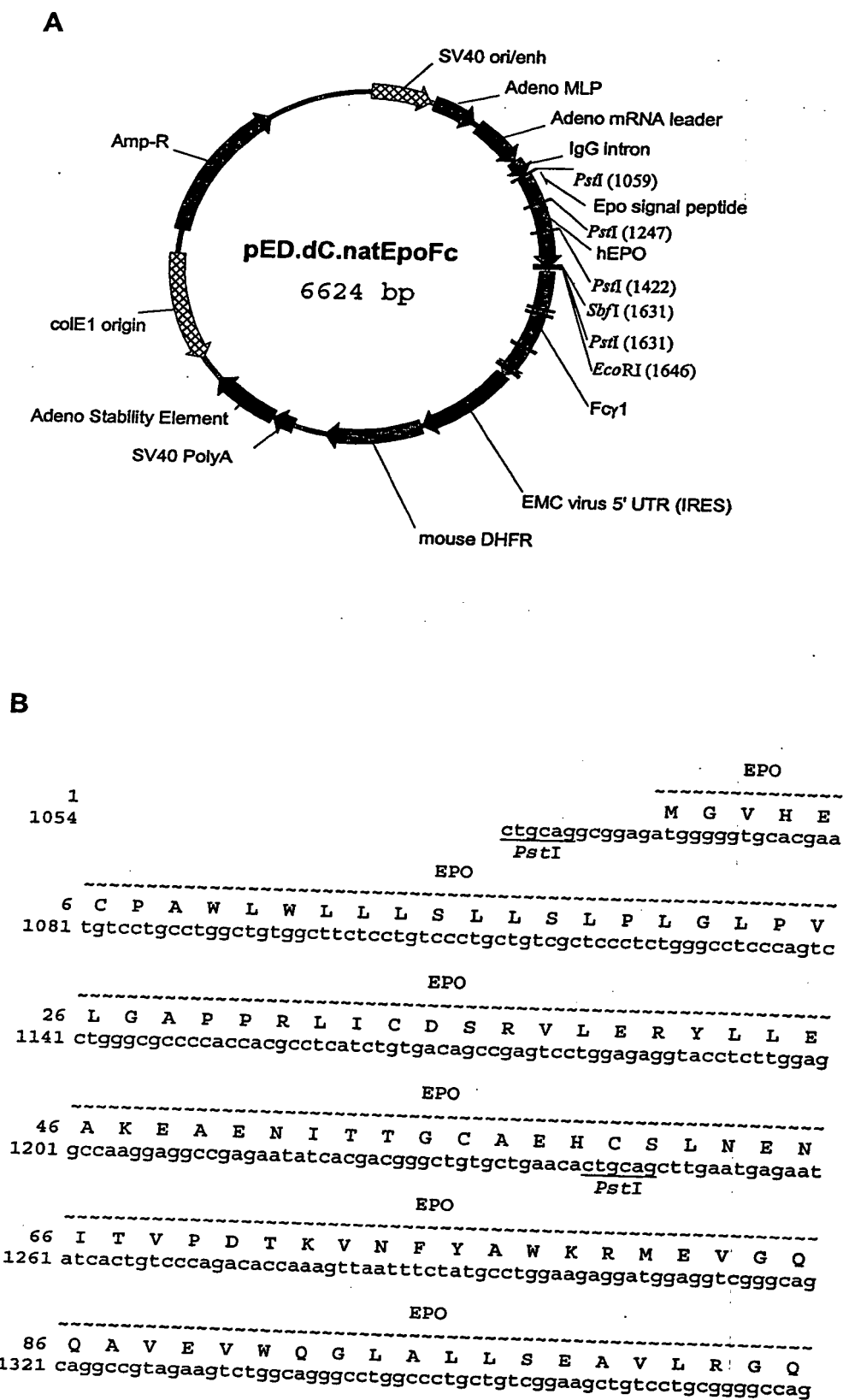
Fcγ1

406 M H E A L H N H Y T Q K S L S L S P G K (SEQ ID NO:8)
2281 atgcatgaggctctgcacaaccactacacgcagaagagcctctccctgtctccgggtaaa

2341 tga

(SEQ ID NO:7)

Figure 5



EPO

106 A L L V N S S Q P W E P L Q L H V D K A
1381 gccctgttggtcaactcttcccagccgtgggagccctgcagctgcatgtggataaagcc
PstI

EPO

126 V S G L R S L T T L L R A L G A Q K E A
1441 gtcagtggccttcgcagcctcaccactctgcttcgggctctgggagcccagaaggaagcc

EPO

146 I S P P D A A S A A P L R T I T A D T F
1501 atctcccctccagatgcggcctcagctgctccactccgaacaatcactgctgacactttc

EPO

166 R K L F R V Y S N F L R G K L K L Y T G
1561 cgcaaactcttccgagtctactccaatttctccggggaaagctgaagctgtacacaggg

EPO

Fcy1

186 E A C R T G D R E F A G A A A V D K T H
1621 gaggcctgcaggacaggggacagagaatttcgccggcgccgctgcggtcgacaaaactcac
SbfI/PstI EcoRI

Fcy1

206 T C P P C P A P E L L G G P S V F L F P
1681 acatgcccaccgtgcccagcacctgaactcctggggggaccgtcagttcttcttcccc

Fcy1

226 P K P K D T L M I S R T P E V T C V V V
1741 ccaaaacccaaggacaccctcatgatctccggacccctgaggtcacatgcgtggtggtg

Fcy1

246 D V S H E D P E V K F N W Y V D G V E V
1801 gacgtgagccacgaagaccctgaggtcaagttcaactggtacgtggacggcgtggaggtg

Fcy1

266 H N A K T K P R E E Q Y N S T Y R V V S
1861 cataatgccaagacaaagccgcgggaggagcagtacaacagcacgtaccgtgtggtcagc

Fcy1

286 V L T V L H Q D W L N G K E Y K C K V S
1921 gtcctcaccgtctctgcaccaggactggctgaatggcaaggagtacaagtgaaggtctcc

Fcy1

306 N K A L P A P I E K T I S K A K G Q P R
1981 aacaaagccctcccagccccatcgagaaaaccatctccaaagccaaagggcagccccga

Fcy1

326 E P Q V Y T L P P S R D E L T K N Q V S
2041 gaaccacaggtgtacaccctgcccccatcccgggatgagctgaccaagaaccaggtcagc

Fcyl

346 L T C L V K G F Y P S D I A V E W E S N
2101 ctgacctgacctggtcaaaggcttctatcccagcgacatcgccgtggagtgggagagcaat

Fcyl

366 G Q P E N N Y K T T P P V L D S D G S F
2161 gggcagccggagaacaactacaagaccacgcctcccgtggtggactccgacggctccttc

Fcyl

386 F L Y S K L T V D K S R W Q Q G N V F S
2221 ttctctacagcaagctcaccgtggacaagagcaggtggcagcaggggaacgtcttctca

Fcyl

406 C S V M H E A L H N H Y T Q K S L S L S
2281 tgctccgtgatgcatgaggctctgcacaaccactacacgcagaagagcctctccctgtct

Fcyl

426 P G K
2341 ccgggtaaatga

(SEQ ID NO:10)
(SEQ ID NO:9)

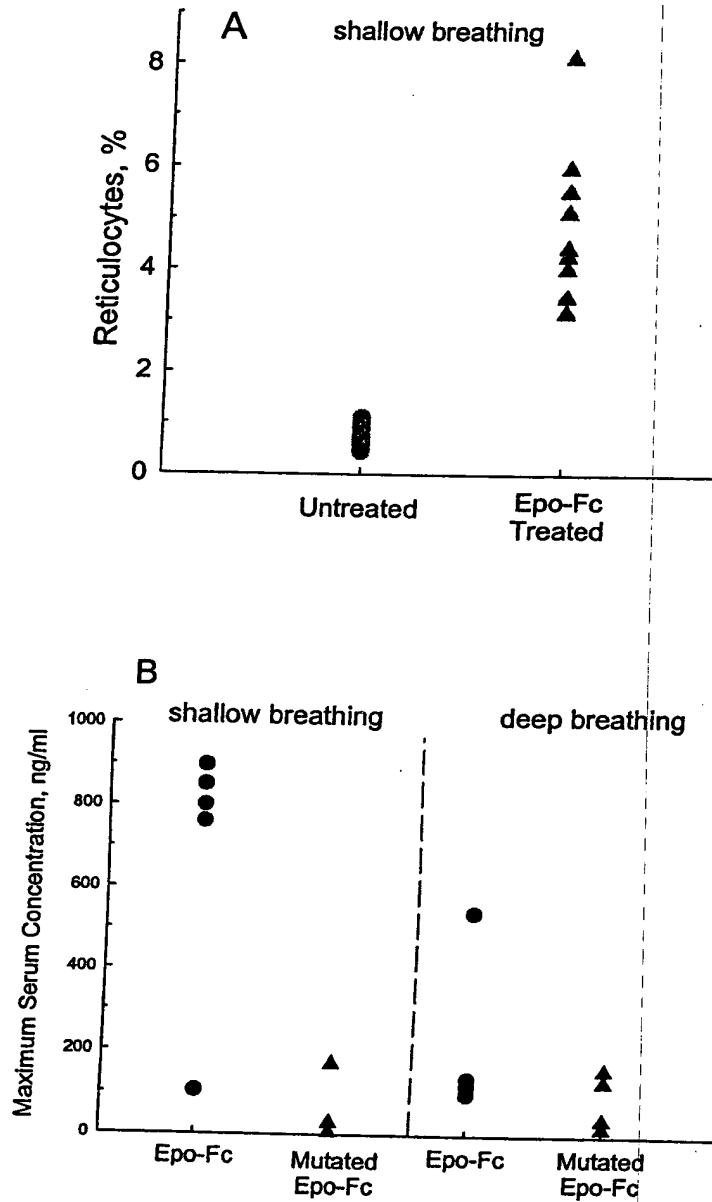


Figure 6

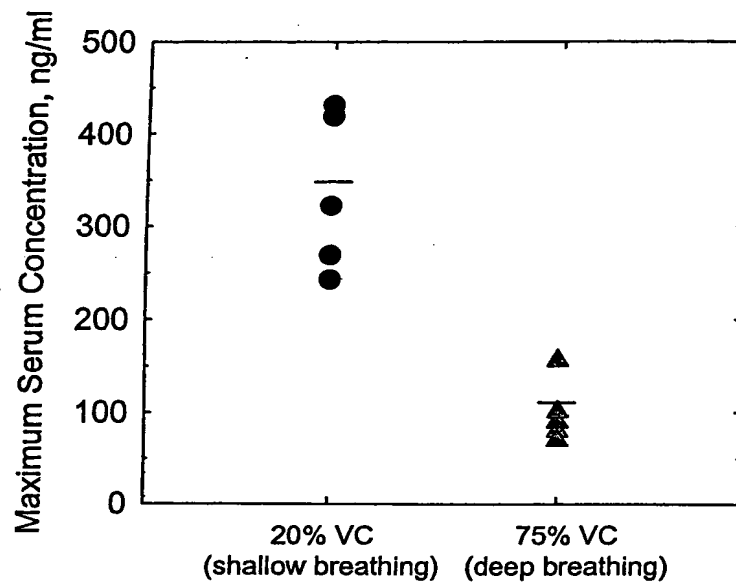


Figure 7

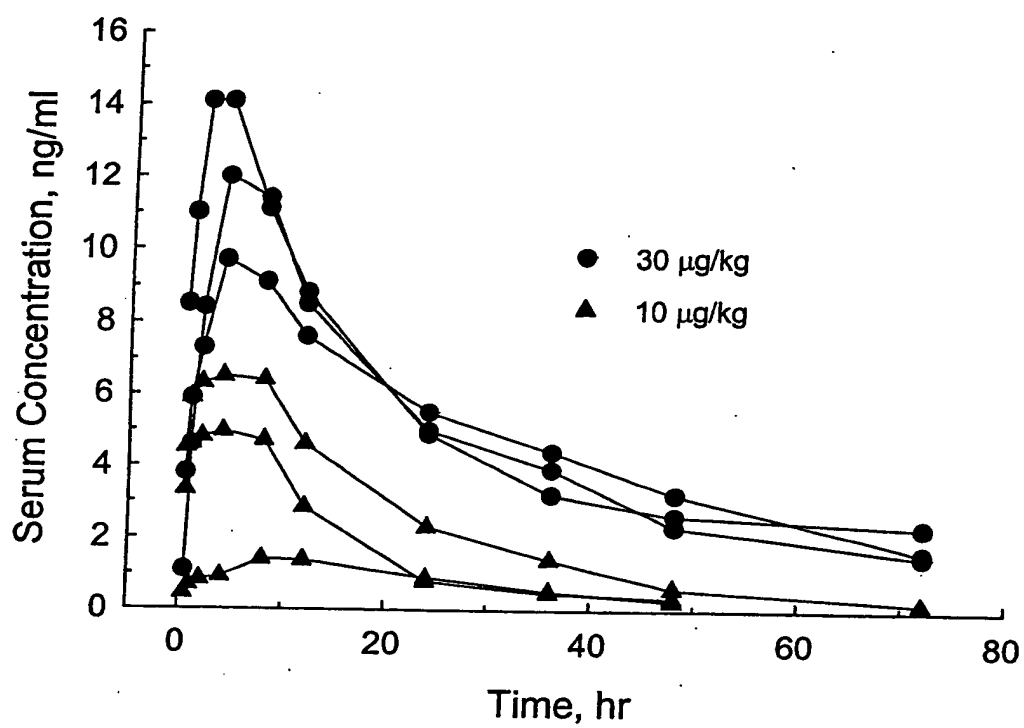


Figure 8

Figure 9

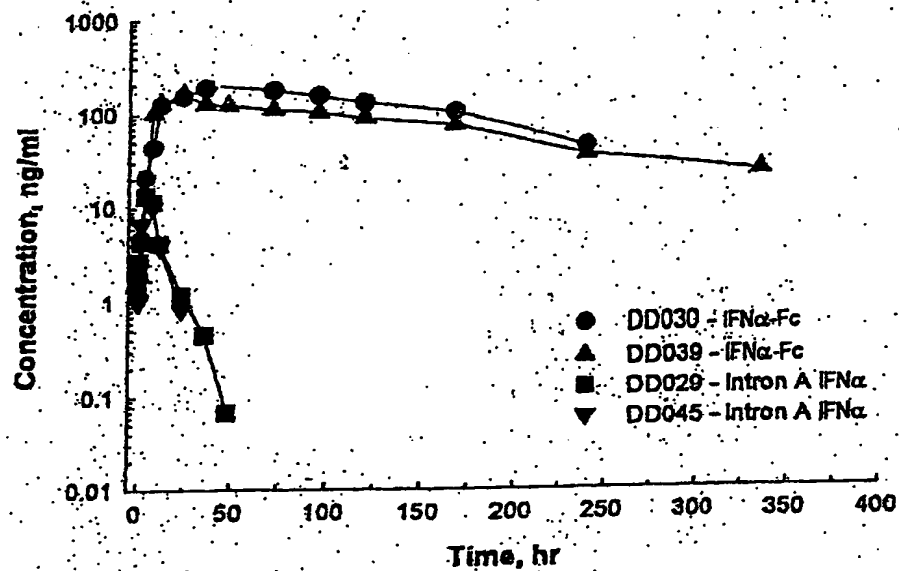


Figure 10

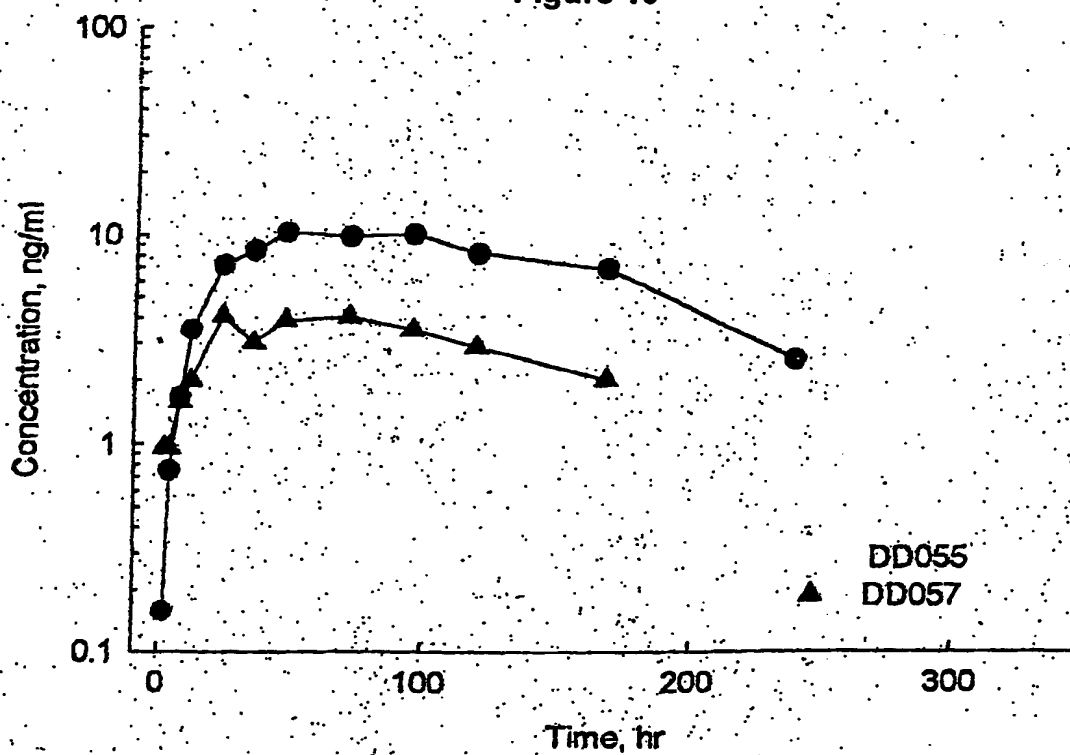
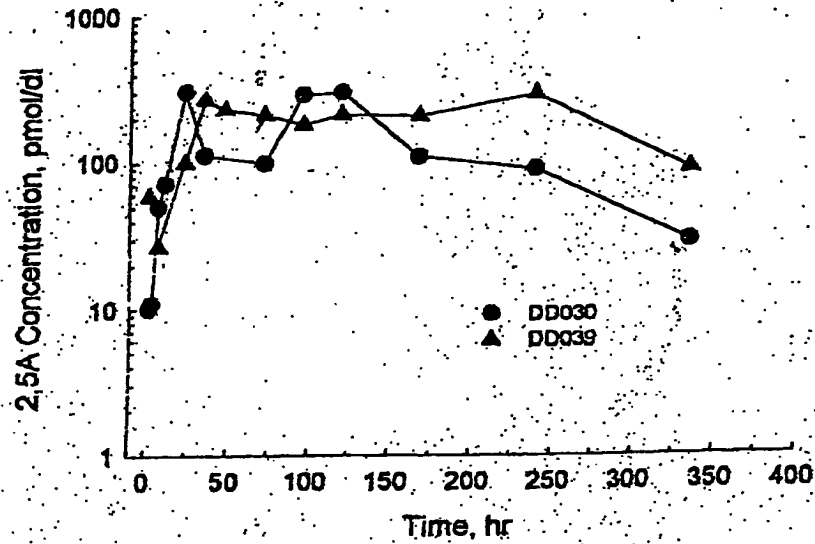


Figure 11

A

Oligoadenylate Synthetase (OAS) Activity



B

Neopterin concentration

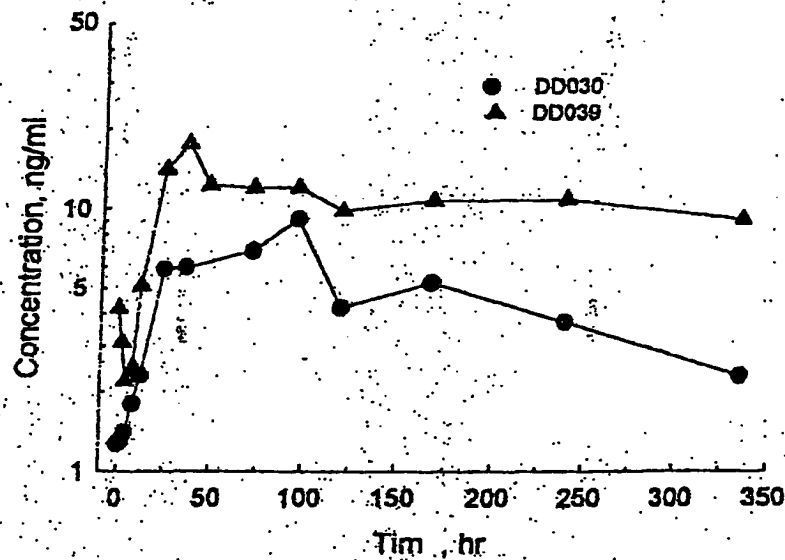


Figure 12

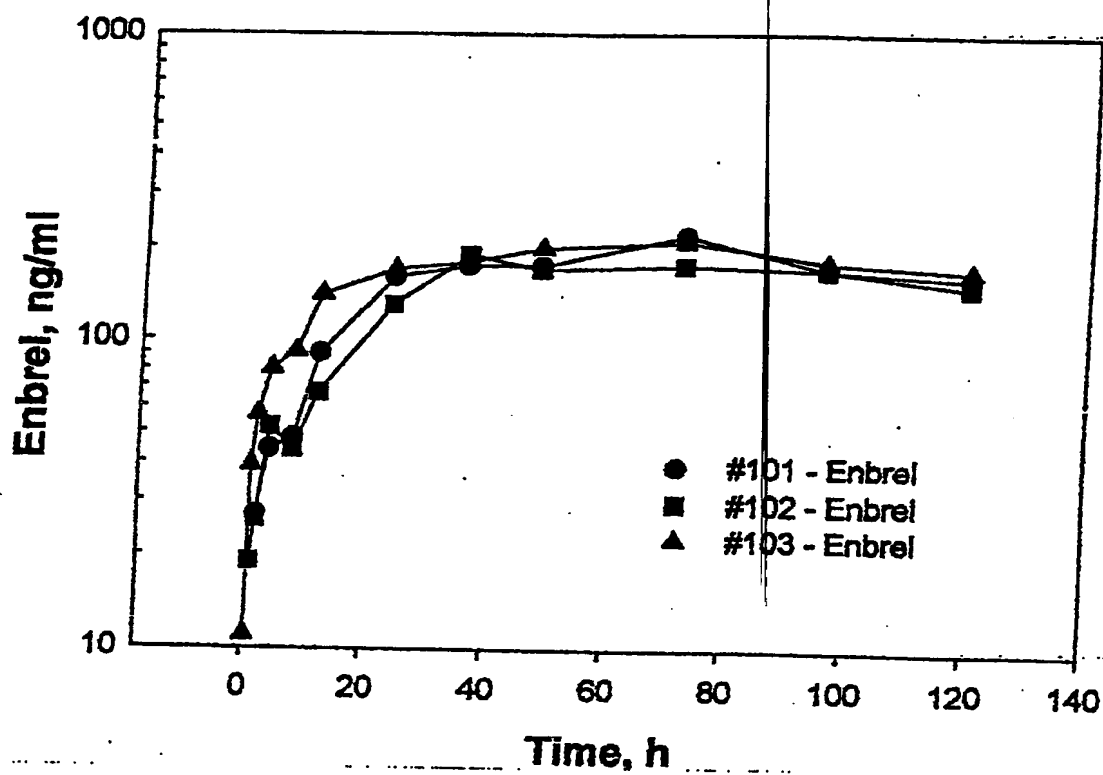


Figure 13

